- WHO and UNICEF offices in Afghanistan should be requested through ACBAR for new publications in the field of essential drugs.
- Restrictions should be made on use of opioids and psychotropic drugs. Dispense of opioids (Narcotics) like morphine, fentanyl, pentazocine (in the present list) as well as psychotropics like diazepam should be registered in a separate special file. This extra registration will help to control the misuse of said drugs.
- Over-use of injections should be prevented through training and information. The working group recommends all organisations to use disposable syringes only. This may appear to be more expensive, but providing fuel for sterilisation also requires funds and in addition sterilization is often done improperly.

4.5.2 DISPENSING:

- Qualified pharmacists/dispensers should be given priority for drug dispense.
- Training workshops in community pharmacy should be organised for pharmacists and dispensers.
- Improving the communication between dispenser and patients at the health facilities.

4.5.3 DRUG USE BY PATIENTS:

- Public health education especially in the field of drug use through, mass media, schools and health facilities should be strengthen.
- Educational messages regarding rational drug use for patients should be formulated by a professional special committee. Messages should be prepared carefully taking into account the technical aspect as well as cultural and psychological factor and the knowledge of the patients.

APPENDIX I:

FURTHER READING:

1- Afghan National Formulary, MOPH, 1996.

2- National list of Essential Drugs,MOPH, 1995.

3- Generic Law, MOPH, 1976.

4- The use of Essential Drugs, Model list of Essential Drugs, WHO,Geneva,1994

5- Report on workshop on Rational use of Essential Drugs, UNICEF/Afghanistan Programme Office,1996.

6- Collection of Hand-outs on Rational use of Essential Drugs, UNICEF/Afghanistan Programme Office,1996.

7- The WHO Certification Scheme on the Quality of Pharmaceutical products Moving to International Commerce, WHO, Geneva, 1994.

8- Management Science for Health, International Drug Price Indicator Guide,MSH,Boston, Mass. 1993

9- UNICEF, Essential Drugs Price List, UNICEF, Copenhagen, 1996.

10- Guideline for developing national drug policy, WHO,Geneva,1988.

11- Estimating Drug Requirement: a practical manual, WHO, Geneva, 1988.

12- Managing Drug Supply,MSH, Boston, Mass. 1985.

13- WHO, Conference of experts on the rational use of drugs. The rational use of drugs: report, WHO, Geneva 1987.

14- United Nations, Consolidated list of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn ,Severely Restricted or not Approved by Governments, UN, New York, 1994.

APPENDIX II

DRUGS TO BE USED AT NATIONAL & REGIONAL HOSPITALS

1. Anaesthetics

General anaesthetics and oxygen

diazepam	injection, 5mg/ml in 2 ml ampoule
halothane	inhalation
ketamin	injection, 50mg (as hydrochloride)/mlin 10ml vial
thiopental	powder for injection, 0.5g, 1g (sodium salt) in ampoule
oxygen	inhalation (medicinal gas)

Local anaesthetics

lidocaine	injection, 1%, 2% (hydrochloride) in vial injection 1%, 2% (hydrochloride) + epinephrine 1/200 000 in vial injection for spinal anaesthesia,5% (hydrochloride) in 2ml ampoule to be mixed with 7.5% glucose solution topical forms, 2% (hydrochloride)

Preoperative medication

atropine	injection, 1mg (sulfate) in 1ml ampoule
diazepam	injection, 5mg/ml in 2 ml ampoule
fentanyl(or pentazocine)	injection, 0.05 mg(as citrate)/ml in 2ml ampoule
promethazine	elixir, 5mg (hydrochloride)/5ml

2. Analgesics, antipyretics, non-steroid anti inflammatory drugs and drugs to treat gout

Non opioids

acetylsalicylic acid	tablet, 300, 500mg
allopurinol	tablet, 100mg
colchicine	tablet, 0.5mg
ibuprofen	tablet, 200mg
indomethacin	capsule, 25mg
paracetamol	tablet, 100,500mg suppository,100mg syrup,125mg/5ml

Opioide analgesics

To be used under restriction.

Morphine(or pentazocine)	injection, 10mg(sulfate) in 1ml ampoule

3. Antiallergics and drugs used in anaphylaxis

chlorphenamine	tablet 4mg (hydrogen maleate) injection 10mg (hydrogen maleate) in 1ml ampoule
dexamethasone	tablet 0.5 mg, 4mg injection,4mg (as sodium phosphate) in 1ml ampoule
epinephrine	injection,1mg (as hydrochloride) in 1ml ampoule
hydrocortisone	powder for injection,100mg(as sodium succinate)in vial
prednisolone	tablet, 5mg

4. Antidote and other substances used in poisonings

General	
charcoal, activated	powder
Specific	
atropine	injection, 1mg (sulfate) in 1ml ampoule
naloxone	injection, 0.4 mg(hydrochloride) in 1ml ampoule

5. Antiepileptics

carbamazepine	scored tablet, 100mg, 200mg
diazepam	injection, 5mg/ml in 2 ml ampoul (intravenous or rectal)
ethosuximide	tablet, 250mg syrup 250mg/5ml
phenobarbital	tablet, 15mg and 100mg elixir, 15mg/5ml
phenytoin	tablet,25mg and 100mg (sodium salt)
valproic acid	enteric coated tablet,200mg(sodium salt)

6. Anti-infective drugs

Anthelmintics	
mebendazole	chewable tablet, 100mg
niclosamide	chewable tablet, 500mg
pyrentel	chewable tablet,250mg(as embonate) oral suspension 50mg(as embonate)/ml
Antibacterial	
amoxicillin	capsule or tablet,250mg, 500mg (anhydrous) powder for oral suspension, 125mg(anhydrous)/5ml
ampicillin	powder for injection ,500mg (as sodium salt)in vial
benzathine benzyl penicillin	powder for injection , 1.44g benzylpenicillin (=2.4 million IU)in vial
benzylpenicillin	powder for injection ,2 million IU (as sodium or potassium salt)
cloxacillin	capsule,500 mg (as sodium salt) powder for oral solution,125mg (as sodium salt)/ml
phenoxymethylpenicillin	tablet,250 mg (as potassium salt) powder for oral suspension,250mg (as potassium salt)/5ml

procaine benzyl penicillin	powder for injection ,1 million IU
chloramphenicol	capsule,250mg, Oral suspension,150mg (as palmitate) salt/5ml powder for injection,1g (as sodium succinate) in vial
erythromycin	capsule or tablet,250 mg (as ethylsuccinate) powder for oral suspension 125mg (as ethylsuccinate) powder for injection,500mg(as lactobionate) in vial
gentamicin	injection,40mg(as sulfate)/ml in 2ml vial
metronidazole	injection,500mg in 100ml vial
sulfamethoxazole + trimethoprime	tablet,100mg + 20mg,400mg + 80mg oral suspension, 200mg + 40mg/5ml
tetracycline	capsule or tablet, 250mg (hydrochloride)
ciprofloxacin	tablet,250 mg (as hydrochloride)
nitrofurantoin	tablet, 100 mg
ofloxacin	tablet, 200mg

Antituberculosis drugs
(To be used only in the presence of anti-tuberculosis programmes)

ethambutol	tablet, 400mg (hydrochloride)
isoniazid	tablet,100mg,300mg
pyrazinamide	tablet, 500mg
Rifampicin	capsule or tablet 150mg,300mg
streptomycin	powder for injection , 1g (as sulfate) in vial
thiacetazone+isoniazid	tablet,50mg + 100mg 150mg + 300mg

Antifungal drugs

griseofulvin	tablet,125mg,250mg
ketoconazole	tablet,200mg oral suspension 100mg/5ml
nystatin	tablet,100 000 IU,500 000IU lozenge,100 000 IU pessary,100 000 IU

Antiprotozoal drugs
Antiamoebic and antigiardiasis drugs

metronidazole	tablet,200mg,500mg oral suspension, 200mg (as benzozte)/5ml

Antimalarial drugs

chloroquine	tablet 150mg(as phosphate or sulfate) syrup,50mg(as phosphate or sulfate)/5ml
primaquine	tablet,7.5mg,15mg (as diphosphate)
quinine	tablet,300mg (as bisulfate or sulfate) injecition,300mg (as dihydrochloride)/ml in 2ml ampoule
sulfadoxine + pyrimethamine	tablet,500mg + 25mg

7. Antimigraine drugs

for treatment of acute attack

acetylsalicylic acid	tablet,300, 500mg
ergotamine	tablet, 2mg (tartrate)
paracetamol	tablet, 500mg

for prophylaxis

propranolol	tablet, 10mg

8. Drugs affecting the blood

Antianaemia drugs

ferrous salt+folic acid	tablet, 60mg + 0.25 mg
hydroxocobalamin	injection, 1mg in 1ml ampoule
iron dextran	injection, equivalent to 50mg iron/ml in 2ml ampoule

Drugs affecting coagulation

desmopressin	injection, 4 micro g (acetate)/ml in 1 ml ampoule
heparin	injection, 1000 IU/ml,5000 IU/ml, 20 000 IU/ml in 1-ml ampoule
phytomenadione	injection, 10mg/ml in 5-ml ampoule tablet, 10 mg
protamine sulfate	injection, 10mg/ml in 5-ml ampoule
warfarin	tablet, 1mg,2mg,5mg (sodium salt)

9. Blood product and plasma substitutes

Plasma substitutes

dextran 70	injectable solution, 6%
polygeline	injectable solution, 3.5%

Plasma fraction for specific uses

albumin,human	injectable solution,5%, 25%
factor VIII concentrate dried (rarely used)	
factor IX complex (coagulation factors II, VII,IX,X) concentrate (rarely used)	dried

10. Cardiovascular drugs

Antianginal drugs

glyceryl trinitrate	tablet,(sublingual), 0.5mg

isosorbide dinitrate	tablet,(sublingual), 5mg
nifidipine	capule and tablet, 10mg
propranolol	tablet, 10mg
atenolol	tablet, 100mg

Antidysrhythmic drugs

lidocaine	injection, 20mg(hydrochloride)/ml in 5 ml ampoule
propranolol	tablet, 10mg, 40mg injection, 1mg (hydrochloride) in 1ml ampoule
verapamil	tablet, 40mg, 80mg injection, 2.5mg (hydrochloride)/ml in 2ml ampoule
atenolol	tablet, 100mg
isoprenaline	tablet, 10mg (hydrochloride) injection, 0.2mg((hydrochloride)/ml in 2ml ampoule
procainamide	tablet, 250mg, 500mg (hydrochloride)
quinidine	tablet, 200 mg (sulfate)

Antihypertensive drugs

hydralazine	tablet, 25mg, 50mg(hydrochloride) powder for injection,20mg (hydrochloride) in ampoule
hydrochlorothiazide	tablet,25 mg
nifidipine	tablet, 10mg
propranolol	tablet, 40mg, 80 mg
atenolol	tablet, 100mg
methyldopa	tablet, 250 mg
sodium nitroprusside	powder for infusion, 50mg in ampoule

Cardiac glycoside

digoxin	tablet, 0.25mg injection, 0.25mg/ml in 2 ml ampoule

Drugs used in vascular shock

dopamine	injection,40mg (hydrochloride)/ml in 5 ml vial

Antithrombotic drugs

acetylsalicylic acid	tablet,100mg
streptokinase	powder for injection, 100 000 IU in vial

11. Dermatological drugs

Antifungal drugs (topical)

benzoic acid+salicylic acid	ointment, 6% + 3 %
miconazole	ointment, 2% (nitrate)

Antiinfective drugs

methylrosanilinium (gention violet)	aqueous solution, 0.5% chloride tincture, 0.5%
neomycin + bacitracin	ointment, 5 mg neomycin sulfate + 500 IU bacitracin zinc / g
silver sulfadiazine	cream,1 % in 500-g container

Anti-inflammatory and antipruritic drugs

betamethasone	ointment, 0.1% (as valerate)
calamine lotion	lotion

keratoplastic and keratolytic agents

coal tar	solution, topical 5%
salicylic acid	solution, topical 5%

Scabicides and pediculicides

benzyl benzoate	lotion , 25%

Ultraviolet-blocking agents

zinc oxide	cream or ointment

12. Diagnostic agents

Ophthalmic drugs

fluorescin	eye drops,1% (sodium salt)

(To be used in the presence of Ophthalmology Department)

Radiocontrast media

amidotrizoate	injection, 140 mg iodine(as sodium or meglumine salts)/ml in 20-ml ampoule
barium sulfate	aqueous suspension
iopamidol	aqueous solution, 370 mg iodine/ml in 10ml ampoule
ipanoic acid	tablet,500mg
propyliodone	oily suspension, 500mg/ml in 20-ml ampoule
meglumine iotroxate	injectable solution, 5 g iodine(as meglumine salt) in 100-250 ml

13. Disinfectants and antiseptics

Antiseptics

chlorhexidine	solution, 5% (diglugonate) for dilution
hydrogen peroxide	solution,3%
polyvidone iodine	solution, containing 0.5% and 1% iodine
methylated spirit	containing 5% methyl alcohol and 95% ethyl alcohol

Disinfectants

calcium hypochlorite powder,	(70% available chlorine) for solution

14. Diuretics

furosemide	tablet, 40 mg injection,20mg /ml in 2ml ampoule
hydrochlorothiazide	tablet, 25mg ,50 mg
mannitol	injectable solution, 10%, 20%
spironolactone	tablet, 25 mg

15.Gastrointestinal drugs

Antacids and other antiulcer drugs

aluminium hydroxide+ magnesium hydroxide	tablet, 500mg
ranitidine	tablet, 150mg, 300mg

Antiemetic drugs

metoclopramide	tablet, 10mg (as hydrochloride) oral solution,5mg (as hydrochloride)5/ml injection, 5mg (as hydrochloride)/ml in 2ml ampoule
promethazine	tablet, 10mg,25mg (hydrochloride) syrup, 5mg(hydrochloride)/ml injection, 25mg (hydrochloride)/ml in 2ml ampoule

Antihaemorrhoidal drugs

local anaesthetic,	ointment or suppository astringent and anti-inflammatory drugs

Antispasmodic drugs

hyoscine	tablet, 10mg (butylbromide) injection, 4mg (butylbromide)/ml in 5ml ampoule

Compound preparations of hyoscine are not advised.

Cathartic drugs

senna	tablet, 7.5mg(sennosides)

Drugs used in diarrhoea
Oral rehydration

oral rehydration salts	powder, 27.9 g/l

Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

16. Hormones, other endocrine drugs

Adrenal hormones and synthetic substitutes

dexamethasone	tablet, 0.5 mg, 4 mg
	injection, 4 mg (as sodium phosphate) in 1-ml ampoule
hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial
prednisolone	tablet, 1 mg, 5 mg

Estrogen

ethinylestradiol	tablet, 0.05 mg

Insulins and other antidiabetic agents

insulin	injection, 40 IU/ml in 10 ml vial, injection (soluble) 80 IU/ml in 10ml vial
intermediate acting	injection,40 IU/ml in 10 ml vial, insulin 80 IU/ml in 10-ml vial(as compound insulin zinc suspension or isophane insulin)
tolbutamide	tablet, 500mg
metformin	tablet, 500mg (hydrochloride)

Progesterons

norethisterone	tablet, 5 mg

Thyroid hormones and antithyroid drugs

levothyroxine	tablet, 0.05mg,0.1 mg(sodium salt)
potassium iodide	tablet, 60 mg
propylthiouracil	tablet, 50 mg

17.Immunologicals

Diagnostic agents

tuberculin, purified	injection protein derivative (PPD)

(To be used in the presence of Anti-tubercluosis programmes)

Immunglobulins

antitetanus	injection immunglobulin (human)
anti rabies vaccine	injection

Vaccines supply should be in line with national Extended Programme of Immunisation (EPI).

18. Muscle relaxants(peripherally acting) and anticholinesterase

neostigmine	tablet, 15 mg(bromide)
	injection, 0.5mg, 2.5 mg (metilsulfate) in 1-ml ampoule
pancuronium	injection, 2mg(bromide)/ml in 2ml ampoule
suxamethonium	injection, 50 mg (chloride)/ml in 2-ml ampoule
	powder for injection, (chloride)

1. SUMMARY:

Afghanistan is faced with serious health problems. Health needs exceed the financial resources. Health services and drugs are provided by the public sector, the private sector and by the aid community in Afghanistan. About 54 national and international organisations are working in the health sector in Afghanistan.

At present drugs are procured by the aid community in a decentralised form and each organisation selects the drugs of their choice. While some organisations provide effective, safe and good quality drugs at reasonable prices, others face difficulties in this domain. In some circumstances drug donations create problems rather than benefits. Few organisations have access to quality control tests or obtain valid certifications on the quality of drugs.

Irrational drug prescribing that can nullify all the efforts. This is a crucial problem in all facilities including hospitals and sub-centres.

In order to harmonize and rationalise the drug supply by the aid community and to promote rational drugs use, a working group was established through ACBAR Health Sub-Committee with financial and technical cooperation of UNICEF. The working group organised a five day Workshop, December 8-12, 1996.

The working group, evaluated the current situation of drug supply and use within the aid community in detail; and based on the National List of Essential Drugs, prepared uniform drugs lists for different health facilities for use by the aid community.

The working group identified a number of unsafe/unnecessary drugs and recommended those not to be supplied. In order to improve the supply system, a centralised procurement system or joint purchasing was recommended. In addition a number of recommendations for improving drug donation, quality assurance, storage, distribution, prescribing, dispensing and drug use by patients were made.

19. Ophthalmological preparations

Anti-infective agents

gentamicin	solution,(eye drops), 0.3%
silver nitrate	solution,(eye drops), 1%
tetracycline	eye ointment 1% , (hydrochloride)

Anti-inflammatory agents
(To be used in the presence of Ophthalmology Department)

prednisolone	solution,(eye drops), 0.5 %

Local anaesthetics
(To be used in the presence of Ophthalmology Department)

tetracaine	solution(eye drops),0.5% (hydrochloride)

Miotics and antiglucoma drugs
(To be used in the presence of Ophthalmology Department)

acetazolamide	tablet, 250 mg
pilocarpine	solution,(eye drops), 2%, 4% (hydrochloride or nitrate)

Mydriatics
(To be used in the presence of Ophthalmology Department)

atropine	solution(eye drops),0.1%,0.5% , 1%(sulfate)

20. Oxytocics and antioxitocics

Oxytocics

ergometrine	tablet,0.2 mg(hydrogen maleate)
	injection,0.2 mg(hydrogen maleate) in 1-ml ampoule
oxytocine	injection, 10 IU in 1 ml ampoule

Antioxytocics

salbutamol	tablet, 4 mg (as sulfate)

21. Psychotherapeutics drugs

amitriptylline	tablet, 25 mg (hydrochloride)
chlorpromazine	tablet, 100 mg, (hydrochloride)
	syrup, 25 mg (hydrochloride)/5ml
	injection,25 mg(hydrochloride)/ml in 2-ml ampoule
diazepam	tablet, 2mg , 5mg

22. Drug acting on the respiratory tract

Antiasthmatic drugs

aminophylline	tablet , 100mg,200mg
	injection, 25 mg/ml in 10ml ampoule
epinephrine	injection, 1mg (as hydrochloride) in 1ml ampoule
salbutamol	tablet, 2mg , 4mg (as sulfate)
	inhalation, 0.1 mg(as sulfate) per dose
	syrup, 2 mg (as sulfate)/5ml
	injection, 0.05 mg (as sulfate) /ml in 5ml ampoule

Antitussives

dextromethorphan	syrup, 15 mg (hydrobromide)/5ml

23. Solutions correcting water, electrolyte and acid-base disturbances

Oral rehydration

oral rehydration salts — powder, 27.9 g/l

Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20
potassium chloride	powder for solution

Parenteral

aminoacids	injectable solution 3.5 %
glucose	injectable solution, 5% isotonic, 25% hypertonic
glucose with sodium chloride	injectable solution, 4 % glucose, 0.18 % sodium chloride (equivalent to Na^{+} 30 mmol/ml, Cl^{-} 30mmol/l
potassium chloride	11.2% solution in 20ml ampoule (equivalent to K^{+} .5mmol/ml Cl^{-} 1.5mmol/ml)
sodium chloride	injectable solution, 0.9% isotonic (equivalent to Na^{+} 154mmol/l, Cl^{-} 154mmol/l)
sodium hydrogen carbonate (sodium bicarbonate)	injectable solution, 1.4% isotonic (equivalent to Na^{+} 167mmol/l, HCO^{-3} 167mmol/l)
	8.4% solution in 10 ml ampoule (equivalent to Na^{+} mol/l,HCO^{-3} 1mol/l)
compound solution of sodium lactate	injectable solution

Miscellaneous

water for injection	2ml , 5 ml ampoule

24. Vitamins and minerals

ascorbic acid	tablet ,50 mg
calcium	tablet, 500mg(lactate)
	injection 100mg(gluconate)/ml in 10ml ampoule
ergoclciferol	capsule or tablet,1.25 mg (50 000 IU)
	oral solution, 0.25 mg /ml(10 000IU/ml)
iodine	iodized oil,1 ml (480mg iodine), 0.5 ml(240mg iodine) in ampoule (oral or injectable)
	capsule, 200mg
nicotinamide	tablet 50 mg
pyridoxine	tablet, 25 mg (hydrochloride)
retinol	sugar coated tablet, 10 000 IU (as palmitate) (5.5mg)
	capsule, 200 000 IU (as palmitate)(110mg)
	oral oily solution, 100 000 IU /ml in multidose dispenser(as palmitate)
	water-miscible injection,100 000IU (as palmitate) (55mg)in 2ml
ribofavin	tablet,5 mg
sodium floride	tablet,0.5mg
	solution, 2% (for professional dental use)
thiamine	tablet, 50 mg(hydrochloride)

REMARKS

At present no NGO is involved in the treatment of Leprosy, Cancer , Parkinson and Leishmania. Drugs to treat these diseases was not disscused here. For interrested organisations in those drugs, reference is made to National List of Essential Drugs, MOPH,1995, that is available from MOPH and WHO.

DRUGS TO BE USED AT PROVENCIAL & DISTRICT HOSPITALS

1. Anaesthetics

General anaesthetics and oxygen

diazepam	injection, 5mg/ml in 2 ml ampoule
ketamin	injection, 50mg(ashydrochloride)/ml in 10ml vial
thiopenthal	powder for injection, 0.5 g and 1 g (sodium salt) in ampoule
oxygen	inhalation (medicinal gas)

Local anaesthetics

lidocaine	injection, 1%, 2% (hydrochloride) in vial injection 1%, 2% (hydrochloride) + epinephrine 1/200 000 in vial injection for spinal anaesthesia,5% (hydrochloride) in 2ml ampoule to be mixed with 7.5% glucose solution topical forms, 2% (hydrochloride)

Preoperative medication

atropine	injection, 1mg (sulfate) in 1ml ampoule
diazepam	injection, 5mg/ml in 2 ml ampoule
promethazine	elixir, 5mg (hydrochloride)/5ml

2. Analgesics, antipyretics, non-steroid anti inflammatory drugs and drugs to treat gout

Non opioids

acetylsalicylic acid	tablet, 300, 500mg
ibuprofen	tablet, 200mg
indomethacin	capsule, 25mg
paracetamol	tablet, 100,500mg suppository,100mg syrup,125mg/5ml

Opioide analgesics

morphine	injection, 10mg(sulfate) in 1ml ampoule (OR pentazocine)

(To be used under restriction)

3.Antiallergics and drugs used in anaphylaxis

chlorphenamine	tablet 4mg (hydrogen maleate) injection 10mg (hydrogen maleate) in 1ml ampoule
epinephrine	injection,1mg (as hydrochloride) in 1ml ampoule
hydrocortisone	powder for injection,100mg(as sodium succinate)in vial
prednisolone	tablet, 5mg

4. Antidote and other substances used in poisonings

General	
charcoal, activated	powder
Specific	
atropine	injection, 1mg (sulfate) in 1ml ampoule
naloxone	injection, 0.4 mg(hydrochloride) in 1ml ampoule

5. Antiepileptics

diazepam	Injection, 5mg/ml in 2 ml ampoule (intravenous or rectal)
ethosuximide	tablet, 250mg syrup 250mg/5ml
phenobarbital	tablet, 15mg and 100mg elixir, 15mg/5ml
phenytoin	tablet,25mg and 100mg (sodium salt)

6. Anti-infective drugs

Anthelmintics

niclosamide	chewable tablet, 500mg
pyrentel	chewable tablet,250mg(as embonate) oral suspension 50mg(as embonate)/ml

Antibacterial

amoxicillin	capsule or tablet,250mg, 500mg (anhydrous) powder for oral suspension, 125mg(anhydrous)/5ml
ampicillin	powder for injection ,500mg (as sodium salt)in vial
benzathine benzyl penicillin	powder for injection,1.44g benzylpenicillin (=2.4 million IU)in vial
benzylpenicillin	powder for injection ,2 million IU (as sodium or potassium salt)
cloxacillin	capsule,500 mg (as sodium salt) powder for oral solution,125mg (as sodium salt)/ml
phenoxymethylpenicillin	tablet,250 mg (as potassium salt) powder for oral suspension,250mg(as potassium salt)/5ml
procaine benzylpenicillin	powder for injection ,1 million IU
chloramphenicol (To be used under restriction)	capsule,250mg oral suspension,150mg(as palmitate salt)/5ml powder for injection,1g (as sodium succinate) in vial
erythromycin	capsule or tablet,250 mg (as ethylsuccinate) powder for oral use,125mg(as ethylsuccinate)/5ml gentamicin injection,40mg(as sulfate)/ml in 2ml vial
metronidazole	tablet,200,500 mg injection,500mg in 100ml vial
sulfamethoxazole +trimethoprime	tablet,100mg + 20mg,400mg + 80mg oral suspension, 200mg + 40mg/5ml
tetracycline	capsule or tablet, 250mg(hydrochloride)
nitrofurantoin	tablet, 100 mg

Anituberculosis drugs
(To be used in the presence of Anti-tuberculosis programmes)

ethambutol	tablet, 400mg (hydrochloride)
isoniazid	tablet, 100mg,300mg
pyrazinamide	tablet, 500mg
Rifampicin	capsule or tablet 150mg,300mg
streptomycin	powder for injection , 1g(as sulfate)in vial
thiacetazone+isoniazid	tablet,50mg + 100mg 150mg + 300mg

Antifungal drugs

griseofulvin	tablet,125mg,250mg
nystatin	tablet,100 000 IU,500 000IU
	lozenge,100 000 IU
	pessary,100 000 IU

Antiprotozoal drugs
Antiamoebic and antigiardiasis drugs

metronidazole	tablet,200mg,500mg
	injection,500mg in100ml vial
	oral suspension,200mg(as benzozte)/5ml

Antimalarial drugs

chloroquine	tablet 150mg(as phosphate or sulfate)
	syrup,50mg(as phosphate or sulfate)/5ml
primaquine	tablet,7.5mg,15mg(as diphosphate)
quinine	tablet,300mg(as bisulfate or sulfate)
	injecition,300mg (as dihydrochloride)/ml in 2ml ampoule
sulfadoxine + pyrimethamine	tablet,500mg + 25mg

7. Antimigraine drugs

for treatment of acute attack

acetylsalicylic acid	tablet,300, 500mg
ergotamine	tablet, 2mg (tartrate)
paracetamol	tablet, 500mg

for prophylaxis

propranolol	tablet, 10mg

8. Drugs affecting the blood

Antianaemia drugs

ferrous salt+folic acid	tablet, 60mg + 0.25 mg
hydroxocobalamin	injection,1mg in 1ml ampoule

Drugs affecting coagulation
(To be used in the presence of Cardiovascular department)

heparin	injection, 1000 IU/ml,5000 IU/ml, 20 000 IU/ml in 1-ml ampoule
phytomenadione	injection, 10mg/ml in 5-ml ampoule tablet, 10 mg
protamine sulfate	injection, 10mg/ml in 5-ml ampoule

9. Blood product and plasma substitutes

Plasma substitutes

dextran 70	injectable solution, 6%

Plasma fraction for specific uses

albumin,human	injectable solution,5%, 25%

10. Cardiovascular drugs

Antianginal drugs

glyceryl trinitrate	tablet,(sublingual), 0.5mg
isosorbide dinitrate	tablet,(sublingual), 5mg
nifidipine	tablet, 10mg
propranolol	tablet, 10mg

Antidysrhythmic drugs

propranolol	tablet, 10mg, 40mg injection, 1mg (hydrochloride) in 1ml ampoule

Antihypertensive drugs

hydrochlorothiazide	tablet,25 mg
nifidipine	tablet, 10mg
Methyl doapa	tablet,250mg

Cardiac glycoside

digoxin	tablet, 0.25mg oral solution, 0.05mg/ml injection, 0.25mg/ml in 2 ml ampoule

Drugs used in vascular shock

dopamine	injection,40mg (hydrochloride)/ml in 5 ml vial

Antithrombotic drugs

acetylsalicylic acid	tablet,300mg

11. Dermatological drugs

Antifungal drugs (topical)

benzoic acid+salicylic acid	ointment, 6% + 3 %
miconazole	ointment, 2% (nitrate)

Antiinfective drugs

methylrosanilinium (gention violet)	aqueous solution, 0.5% chloride tincture, 0.5%
neomycin + bacitracin	ointment, 5 mg neomycin sulfate + 500 IU bacitracin zinc / g
silver sulfadiazine	cream, 1 % in 500-g container

Anti-inflammatory and antipruritic drugs

calamine lotion	lotion
Bethamethazon	ointment,

keratoplastic and keratolytic agents

coal tar	solution, topical 5%
salicylic acid	solution, topical 5%

Scabicides and pediculicides

benzyl benzoate	lotion , 25%
zinc oxide	cream or ointment

12. Diagnostic agents

Radiocontrast media

amidotrizoate	injection, 140 mg iodine(as sodium or meglumine salts)/ml in 20-ml ampoule
barium sulfate	aqueous suspension

13 Disinfectants and antiseptics

Antiseptics

chlorhexidine	solution, 5% (digluconate) for dilution
hydrogen peroxide	solution,3%
polyvidone iodine	solution, containing 0.5% and 1% iodine
methylated spirit	containing 5% methyl alcohol and 95% ethyl alcohol

Disinfectants

calcium hypochlorite	powder, (70% available chlorine) for solution

14. Diuretics

furosemide	tablet, 40 mg injection,20mg /ml in 2ml ampoule
hydrochlorothiazide	tablet, 25mg ,50 mg
mannitol	injectable solution, 10%, 20%

15.Gastrointestinal drugs

Antacids and other antiulcer drugs

aluminium hydroxide+ magnesium hydroxide	tablet, 500mg
ranitidine	tablet, 150mg, 300mg

Antiemetic drugs

metoclopramide	tablet, 10mg (as hydrochloride) oral solution,5mg (as hydrochloride)5/ml injection, 5mg (as hydrochloride)/ml in 2ml ampoule
promethazine	tablet, 10mg,25mg (hydrochloride) syrup, 5mg(hydrochloride)/ml injection, 25mg (hydrochloride)/ml in 2-ml ampoule

Antihaemorrhoidal drugs

local anaesthetic,	ointment or suppository astringent and anti-inflammatory drugs

Antispasmodic drugs

hyoscine	tablet, 10mg (butylbromide) injection, 4mg (butylbromide)/ml in 5ml ampoule

(Compound preparation of hyoscine are not advised)

Cathartic drugs

senna	tablet, 7.5mg(sennosides)

Drugs used in diarrhoea
Oral rehydration

oral rehydration salts	powder, 27.9 g/l
Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

16. Hormones, other endocrine drugs

Adrenal hormones and synthetic substitutes

hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial
prednisolone	tablet, 1 mg, 5 mg

Insulins and other antidiabetic agents

insulin	injection, 40 IU/ml in 10 ml vial, injection(soluble) 80 IU/ml in 80Oml vial
intermediate acting insulin	injection,40 IU/ml in 10 ml vial, 80 IU/ml in 10-ml vial(as compound insulin zinc suspension or isophane insulin)
metformin	tablet,

Progesterons

norethisterone	tablet, 5 mg

Thyroid hormones and antithyroid drugs

(to be used in endemic area)

levothyroxine	tablet, 0.05mg,0.1 mg(sodium salt)
potassium iodide	tablet, 60 mg
propylthiouracil	tablet, 50 mg

17.immunologicals

Diagnostic agents

tuberculin, purified	injection protein derivative (PPD)

(To be used in the presence of Anti-tubercluosis programmes)

Immunglobulins

antitetanus	injection immunglobulin (human)

Vaccines should be in line with national Extended Programme of Immunisation (EPI).

18.Muscle relaxants(peripherally acting) and anticholinesterase

neostigmine	tablet, 15 mg(bromide) injection, 0.5mg, 2.5 mg(metilsulfate) in 1-ml ampoule
pancuronium	injection, 2mg(bromide)/ml in 2ml ampoule
suxamethonium	injection, 50 mg (chloride)/ml in 2-ml ampoule powder for injection, (chloride)

19. Ophthalmological preparations

Anti-infective agents

gentamicin	solution,(eye drops), 0.3%
silver nitrate	solution,(eye drops), 1%
tetracycline	eye ointment 1% , (hydrochloride)

Anti-inflammatory agents

(To be used in Ophthalmology department)

prednisolone	solution,(eye drops), 0.5 %

2. INTRODUCTION:

2.1. BACKGROUND:

Afghanistan being one of the least developed countries in the world and faced with long civil unrest, is also faced with serious health problems. Health needs exceed its financial resources. Health services are provided by the public sector, the private sector and the aid community.

About 54 national and international organisations are working in the health sector in Afghanistan. (1) It is estimated that some US$ 12 Million are spent in this area. Drugs are also provided through these organisations. Some organisations are only involved in drug donation while others besides drug donation, run health facilities where drugs are prescribed and dispensed. The financial capacity also differs greatly among organisations.

At present drugs are procured by the aid community in a decentralised form, i.e., every organisation selects their own drugs. In those organisations running health facilities, the process of drug supply including selection, quantification, procurement, storage, distribution, transportation, prescribing and dispensing take place within that organisation.

While some organisations provide effective, safe and good quality drugs at reasonable prices, others face difficulties in this domain. A number of unnecessary and unsafe drugs with irrational formulations are procured by some organisations. In certain circumstances drug donations can produce problems rather than benefits in. Drugs use including prescribing, dispensing and use by patients is not satisfactory, in many instances, which can in turn produce more problems.

The public central drug supply department and the central quality control laboratory in Kabul have been destroyed reducing the possibility of quality control within Afghanistan.

Due to the above reasons the aid community involved in the health sector requested ACBAR through ACBAR Health Sub-Committee, to establish a working group on the harmonisation and rationalisation of drug supply. ACBAR with financial and technical cooperation of UNICEF organised a working group from December 8-12, 1996.

(1) ACBAR Data base, Agency Coordinating Body Afghan Relief 1995

Miotics and antiglucoma drugs
(To be used in Ophthalmology department)

acetazolamide	tablet, 250 mg
pilocarpine	solution,(eye drops), 2%, 4% (hydrochloride or nitrate)

Mydriatics
(To be used in Ophthalmology department)

atropine	solution(eye drops),0.1%,0.5% , 1%(sulfate)

20 Oxytocics and antioxytocics

Oxytocics

ergometrine	tablet,0.2 mg(hydrogen maleate)
	injection,0.2 mg(hydrogen maleate)in 1-ml ampoule oxytocine
	injection, 10 IU in 1 ml ampoule

Antioxytocics

salbutamol	tablet, 4 mg (as sulfate)

21 Psychotherapeutics drugs

amitriptylline	tablet, 25 mg (hydrochloride)
chlorpromazine	tablet, 100 mg, (hydrochloride)
	syrup, 25 mg (hydrochloride)/5ml
	injection,25 mg(hydrochloride)/ml in 2-ml ampoule
diazepam	tablet, 2mg , 5mg

22 Drug acting on the respiratory tract

Antiasthmatic drugs

aminophylline	tablet , 100mg,200mg
	injection, 25 mg/ml in 10ml ampoule
epinephrine	injection, 1mg (as hydrochloride) in 1ml ampoule
salbutamol	tablet, 2mg , 4mg (as sulfate)
	inhalation, 0.1 mg(as sulfate) per dose
	syrup, 2 mg (as sulfate)/5ml
	injection, 0.05 mg (as sulfate) /ml in 5ml ampoule

Antitussives

dextromethorphan	syrup, 15 mg (hydrobromide)/5ml

23. Solutions correcting water, electrolyte and acid-base disturbances

Oral rehydration

oral rehydration salts	powder, 27.9 g/l
Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20
potassium chloride	powder for solution

Parenteral

glucose	injectable solution, 5% isotonic, 25% hypertonic
glucose with sodium chloride	injectable solution, 4 % glucose, 0.18 % sodium chloride (equivalent to Na^{+} 30 mmol/ml, Cl^{-} 30mmol/l
sodium chloride	injectable solution, 0.9% isotonic (equivalent to Na^{+}154mmol/l, Cl^{-} 154mmol/l)
sodium hydrogen carbonate (sodium bicarbonate)	injectable solution,1.4% isotonic(equivalent to Na^{+} 167 mmol/l, $HCO3^{-}$ 167mmol/l) 8.4% solution in 10 ml ampoule (equivalent to Na^{+} 1 mol/l, $HCO3^{-}$ 1 mol/l)
compound solution of sodium lactate	injectable solution

Miscellaneous

water for injection	2ml , 5 ml ampoule

24 Vitamins and minerals

ascorbic acid	tablet ,50 mg
calcium glugonate	injection 100mg/ml in 10ml ampoule
calcium	tablet, 500mg(lactate)
ergoclciferol	capsule or tablet,1.25 mg (50 000 IU) oral solution, 0.25 mg /ml(10 000IU/ml)
iodine	iodized oil,1 ml (480mg iodine), 0.5 ml(240mg iodine) in asmpoule (oral or injectable) capsule, 200mg
nicotinamide	tablet 50 mg
pyridoxine	tablet, 25 mg (hydrochloride)
retinol	sugar coated tablet, 10 000 IU (as palmitate) (5.5mg) capsule, 200 000 IU (as palmitate)(110mg) oral oily solution, 100 000 IU /ml in multidose dispenser(as palmitate) water-miscible injection,100 000IU (as palmitate) (55mg)in 2ml ampoule

ribofavin	tablet,5 mg
sodium floride	tablet,0.5mg
	solution, 2% (for professional dental use)
thiamine	tablet, 50 mg(hydrochloride)

DRUGS TO BE USED AT BASIC HEALTH CENTRE/BASIC HEALTH UNIT/C1

(Prescribers: doctors)

1. Anaesthetics
Local anaesthetics

lidocaine	injection, 1%, 2% (hydrochloride) in vial
	injection 1%, 2% (hydrochloride) + epinephrine 1/200 000 in vial
	topical forms, 2% (hydrochloride)

2. Analgesics, antipyretics, non-steroid anti inflammatory drugs and drugs to treat gout

acetylsalicylic acid	tablet, 100, 500mg
ibuprofen	tablet, 200mg
paracetamol	tablet, 100,500mg
	suppository,100mg
	syrup,125mg/5ml
morphine	injection, 10mg(sulfate) in 1ml ampoule (OR pentazocine)

(To be used under restriction)

3.Antiallergics and drugs used in anaphylaxis

chlorphenamine	tablet 4mg (hydrogen maleate)
	injection 10mg (hydrogen maleate) in 1ml ampoule
epinephrine	injection,1mg (as hydrochloride) in 1ml ampoule
hydrocortisone	powder for injection,100mg(as sodium succinate)in vial

4. Antidote and other substances used in poisonings

General

charcoal, activated	powder

5. Antiepileptics

diazepam	injection, 5mg/ml in 2 ml ampoule (intravenous or rectal)
phenobarbital	tablet, 15mg and 100mg
	elixir, 15mg/5ml

6. Anti-infective drugs

Anthelmintics

niclosamide	chewable tablet, 500mg
pyrentel	chewable tablet,250mg(as embonate)
	oral suspension 50mg(as embonate)/ml

Antibacterial

amoxicillin	capsule or tablet,250mg, 500mg (anhydrous)
phenoxymethylpenicillin	tablet,250 mg (as potassium salt)
	powder for oral suspension,250mg(as potassium salt)/5ml

procaine benzylpenicillin	powder for injection ,1 million IU
benzathine benzyl penicillin	powder for injection , 1.44g benzylpenicillin (=2.4 million IU)in vial
erythromycin	capsule or tablet,250 mg (as ethylsuccinate)
sulfamethoxazole + trimethoprime	tablet,100mg + 20mg,400mg + 80mg oral suspension, 200mg + 40mg/5ml

Antifungal drugs

griseofulvin	tablet,125mg,250mg
nystatin	tablet,100 000 IU,500 000IU pessary,100 000 IU

Antiprotozoal drugs

Antiamoebic and antigiardiasis drugs

metronidazole	tablet,200mg,500mg oral suspension,200mg(as benzozte)/5ml

Antimalarial drugs

chloroquine	tablet 150mg(as phosphate or sulfate) syrup,50mg(as phosphate or sulfate)/5ml
primaquine	tablet,7.5mg,15mg(as diphosphate)
quinine	tablet,300mg(as bisulfate or sulfate) injecition,300mg (as dihydrochloride)/ml in 2ml ampoule

7. Antimigraine drugs

for treatment of acute attack

acetylsalicylic acid	tablet, 500mg
paracetamol	tablet, 500mg

8. Drugs affecting the blood

10.1 Antianaemia drugs

ferrous salt+folic acid	tablet, 60mg + 0.25 mg

9. Blood product and plasma substitutes

Plasma substitutes

dextran 70	injectable solution, 6%

10. Cardiovascular drugs

Antianginal drugs

glyceryl trinitrate	tablet,(sublingual), 0.5mg

Antihypertensive drugs

hydrochlorothiazide	tablet,25 mg
methyl dopa	tablet,250 mg
nifidipine	capsule, 10mg

Cardiac glycoside

digoxin	tablet, 0.25mg

11. Dermatological drugs

Antifungal drugs (topical)

benzoic acid+salicylic acid	ointment, 6% + 3 %

Antiinfective drugs

methylrosanilinium (gention violet)	aqueous solution, 0.5% chloride tincture, 0.5%
neomycin + bacitracin	ointment, 5 mg neomycin sulfate + 500 IU bacitracin zinc / g
silver sulfadiazine	cream, 1 % in 500-g container

Anti-inflammatory and antipruritic drugs

calamine lotion	lotion

Scabicides and pediculicides

benzyl benzoate	lotion , 25%

12 Disinfectants and antiseptics

Antiseptics

chlorhexidine	solution, 5% (diglugonate) for dilution
hydrogen peroxide	solution,3%
polyvidon iodine	solution, containing 0.5% and 1% iodine
methylated spirit	methylated spirit containing 5% methyl alcohol and 95% ethyl alcohol

Disinfectants

calcium hypochlorite	powder, (70% available chlorine) for solution

13. Diuretics

hydrochlorothiazide	tablet, 25mg ,50 mg

14.Gastrointestinal drugs

Antacids and other antiulcer drugs

aluminium hydroxide+ magnesium hydroxide	tablet, 500mg

Antiemetic drugs

metoclopramide	tablet, 10mg (as hydrochloride) oral solution,5mg(ashydrochloride)5/ml injection, 5mg (as hydrochloride)/ml in 2ml ampoule

Antihaemorrhoidal drugs

local anaesthetic,	ointment or suppository astringent and anti-inflammatory drugs

Antispasmodic drugs

hyoscine	tablet, 10mg (butylbromide)

(compound preparation of hyoscine is not asvised)

Cathartic drugs

senna	tablet, 7.5mg(sennosides)

Drugs used in diarrhoea
Oral rehydration

oral rehydration salts	powder, 27.9 g/l

Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

15. Hormones, other endocrine drugs
Adrenal hormones and synthetic substitutes

hydrocortisone	powder for injection, 100 mg (as sodium succinate) in vial

16.immunologicals

Vaccines should be in line with national Extended Programme of Immunisation (EPI).

17. Ophthalmological preparations

Anti-infective agents

gentamicin	solution,(eye drops), 0.3%
silver nitrate	solution,(eye drops), 1%
tetracycline	eye ointment 1% , (hydrochloride)

18. Oxytocics and antioxytocics

Oxytocics

ergometrine	tablet,0.2 mg(hydrogen maleate) injection,0.2 mg(hydrogen maleate) in 1-ml ampoule
oxytocine	injection, 10 IU in 1 ml ampoule

(only in the presence of MCH clinic)

Antioxytocics

salbutamol	tablet, 4 mg (as sulfate)

(only in the presence of MCH clinic)

19. Psychotherapeutics drugs

diazepam	tablet, 2mg , 5mg

20. Drug acting on the respiratory tract

Antiasthmatic drugs

aminophylline	tablet , 100mg,200mg injection, 25 mg/ml in 10ml ampoule epinephrine injection, 1mg (as hydrochloride) in 1ml ampoule
salbutamol	tablet, 2mg , 4mg (as sulfate) syrup, 2 mg (as sulfate)/5ml

Antitussives

dextromethorphan	syrup, 15 mg (hydrobromide)/5ml

21. Solutions correcting water, electrolyte and acid-base disturbances

Oral rehydration

oral rehydration salts	powder, 27.9 g/l
Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

Parenteral

sodium chloride	injectable solution, 0.9% isotonic (equivalent to Na^+ 154mmol/l, Cl^- 154mmol/l)
compound solution of sodium lactate	injectable solution

Miscellaneous

water for injection	2ml , 5 ml ampoule

22 Vitamins and minerals

ascorbic acid	tablet ,50 mg
calcium	tablet, 500mg(lactate)
ergoclciferol	capsule or tablet,1.25 mg (50 000 IU) oral solution, 0.25 mg /ml(10 000IU/ml)
iodine	iodized oil,1 ml (480mg iodine), capsule, 200mg
retinol	sugar coated tablet, 10 000 IU (as palmitate) (5.5mg) capsule, 200 000 IU (as palmitate)(110mg)

DRUGS USED AT SUB-CENTRE/C2

(prescribers: medical assistants & med-level health workers with more than one year medical education)

1. Analgesics, antipyretics, non-steroid anti inflammatory drugs

acetylsalicylic acid	tablet, 300, 500mg
paracetamol	tablet, 100,500mg syrup,125mg/5ml

2.Antiallergics and drugs used in anaphylaxis

chlorphenamine	tablet 4mg (hydrogen maleate)

3. Antidote and other substances used in poisonings

charcoal, activated	powder

4. Anti-infective drugs

Anthelmintics

pyrentel	chewable tablet,250mg(as embonate) oral suspension 50mg(as embonate)/ml

Antibacterial

amoxicillin	capsule or tablet,250mg, (anhydrous)
phenoxymethyl	tablet,250 mg (as potassium salt)
penicillin	powder for oral suspension,250mg(as potassium salt)/5ml
erythromycin	capsule or tablet,250 mg (as ethylsuccinate)
sulfamethoxazole + trimethoprime	tablet, 100mg + 20mg, 400mg + 80mg oral suspension, 200mg + 40mg/5ml

Antifungal drugs

nystatin	tablet,100 000 IU

Antiprotozoal drugs
Antiamoebic and antigiardiasis drugs

metronidazole	tablet,200mg,500mg oral suspension,200mg(as benzozte)/5ml

Antimalarial drugs

chloroquine	tablet 150mg(as phosphate or sulfate) syrup,50mg(as phosphate or sulfate)/5ml

5. Drugs affecting the blood

ferrous salt+folic acid	tablet, 60mg + 0.25 mg

6. Dermatological drugs

Antiinfective drugs

methylrosanilinium chloride (gention violet)	aqueous solution, 0.5% tincture, 0.5%
silver sulfadiazine	cream, 1 % in 500-g container

Anti-inflammatory and antipruritic drugs

calamine lotion	lotion

Scabicides and pediculicides

benzyl benzoate	lotion , 25%

7. Disinfectants and antiseptics

Antiseptics

chlorhexidine	solution, 5% (diglugonate) for dilution
polyvidon iodine	solution, containing 0.5% and 1% iodine

Disinfectants

calcium hypochlorite	powder, (70% available chlorine) for solution

8.Gastrointestinal drugs

Antacids and other antiulcer drugs

aluminium hydroxide+ magnesium hydroxide	tablet, 500mg

Antiemetic drugs

metoclopramide	tablet, 10mg (as hydrochloride)

Antihaemorrhoidal drugs

local anaesthetic, astringent and anti-inflammatory drugs	ointment or suppository

Cathartic drugs

senna	tablet, 7.5mg(sennosides)

Drugs used in diarrhoea

Oral rehydration

oral rehydration salts	powder, 27.9 g/l

Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

2.2 OBJECTIVES:

The objectives of the working group were:

- To maximize the use of available resources in procurement of safe, effective, useful and good quality drugs on a regular basis by the aid community.

- Promoting rational drugs use

- Protect the health of people against the hazards of unsafe and ineffective drugs and from irrational use of drugs.

3. CURRENT PROBLEMS:

3.1 SELECTION & QUANTIFICATION:

The majority of organisations do not have the required staff for satisfactory selection and quantification. A number of unnecessary drugs, like combined antidiarrhoeal paediatric formulations, multivitamins, irrational fixed ratio combinations and other drugs that are banned or withdrawn in other countries like dipirone and phenylbutazone are provided by some organisations. Inaccurate quantification results, either in under-prescribing or accumulation and expiration of drugs.

3.2 PROCUREMENT & QUALITY ASSURANCE:

Drugs are procured in a decentralized manner through tenders, direct purchase or donation. Few organisations have access to quality control tests or valid certification on the quality of drugs. Organisations with limited financial capacity who procure drugs through direct purchase from whole-salers or intermediate dealers are faced with crucial problems.

9. Ophthalmological preparations

Anti-infective agents

silver nitrate	solution,(eye drops), 1%
tetracycline	eye ointment 1% , (hydrochloride)

10. Oxytocics

ergometrine	tablet,0.2 mg(hydrogen maleate)

11. Drug acting on the respiratory tract

Antiasthmatic drugs

aminophylline	tablet , 100mg,200mg injection, 25 mg/ml in 10ml ampoule

Antitussives

dextromethorphan	syrup, 15 mg (hydrobromide)/5ml

12. Solutions correcting water, electrolyte and acid-base disturbances

oral rehydration salts	powder, 27.9 g/l
Components	*g litre*
sodium chloride	3.5
trisodium citrate dihydrate	2.9
potassium chloride	1.5
glucose	20

13. Vitamins and minerals

ascorbic acid	tablet ,50 mg
ergoclciferol	capsule or tablet,1.25 mg (50 000 IU) oral solution, 0.25 mg /ml(10 000IU/ml)
calcium	tablet, 500mg (lactate)
iodine	iodized oil,1 ml (480mg iodine), capsule, 200mg

3.3 STORAGE & DISTRIBUTION

The majority of organisations lack suitable warehouse storage facilities at central and peripheral levels. Good and safe systems of stock keeping and distribution are practised in all organisations. Sometimes administerial problems regarding custom clearance, transportation and other documentation are experienced.

3.4 USE OF DRUGS

Irrational drug prescribing can nullify all efforts and is a crucial problem in all facilities including hospitals and other health facilities. Over-prescribing of antibiotics, analgesics; misuse of injections and psychotherapeutic; and multiple prescribing as well as under-prescribing are widespread. The majority of prescribers do not have access to unbiased and reliable drugs information references.

Drug dispense at health facilities is often disrupted by patient pressure i.e some patients urge dispensers to give them their desired drugs or dosage forms other than that prescribed.

Although no study has been done in the field of drug use by patients, reports say that patients drug information is very low and their perception on drugs relies more; on *a pill for every ill* conception.

4. RECOMMENDATIONS

4.1 SELECTION & QUANTIFICATION:

The working group used the National List of Essential Drugs [2] as the basis for the drugs list to be recommeded for use by aid community. Taking into consideration financial resources priority was given to the availability of pharmaceutical products of proven efficacy, safety and those that satisfy the real health needs of the population. The choice of drugs was based on many factors: such as the pattern of prevalent diseases; the treatment facilities; the training and experiences of available personnel; financial resources and genetic, demographic and environmental factors. Separate limited lists were prepared for National/Regional hospitals, Provincial/District hospitals, Basic Health Centre/C1 Sub-centre/C2 (see Appendix I page 11).

(2) National List of Essential Drugs, MOPH, May 1995. Availabel from MOPH and WHO office, Afghanistan.

Due to the vast differences between health facilities, organisations' policies and financial resources, the issue of quantification was left to be determined by the organisation themselves. The working group recommends that the quantification should be based on the number of population covered by the health facility, morbidity rate, the standard drug treatment schedules and the ratio of adults/children

The following recommendations are made by the working group, regarding drug selection:

4.1.1.

Due to the severe side-effects and or ineffectiveness, the following drugs should not be procured:

- Antidiarrhoeal paediatric formulations including Kaolin, Pectin, Loperamide, Diphenoxylate
- Dipirone/ Analgin,
- Paediatric Aspirin
- Phenylbutazone and Oxyphenbutazone
- Multivitamins e.i., Two or more than two vitamins with or without other ingredients

4.1.2. Fixed-ratio combinations:

Only a limited number of fixed-ratio combinations are acceptable. Many fixed-ratio combinations are irrational and may cause several problems. According to WHO [3], Fixed-ratio combination products are acceptable only when the dosage of each ingredient meets the requirement of a defined population group and when the combination has a proven advantage over single compounds administered separately in therapeutic effect, safety or compliance.

(3) The Use of Essential Drugs, Model List of Essential Drugs (Seventh list), WHO, Geneva 1992.

4.1.3. Drug donation:

Drug donations should be in line with WHO Guidelines for drug donation [4]. The main points from this guideline are as follows:

- All drug donations should be based on an expressed need and be relevant to the diseases pattern in the recipient country.
- All donated drugs should be approved for use in the recipient country and appear on the national list of essential drugs or if a national list is not available, on the WHO model list of essential drugs.
- The presentation, strength and formulation of donated drugs should, as far as possible, be similar to those commonly used in the recipient country.
- All donated drugs should be obtained from a reliable source and comply with quality standards in both the donor and recipient country.
- No drugs should be donated that have been issued to patients and then returned to a pharmacy or elsewhere, or were given to health professionals as free samples.
- After arrival in the recipient country all donated drugs should have a remaining shelf-life of at least one year.
- All drugs should be labelled in a language that is easily understood in the recipient country.
- As much as possible, donated drugs should be presented in larger quantity units and hospital packs.

For more information see the WHO document.

(4) Essential Drug Monitor, No 21, WH), Geneva 1996.

4.2 PROCUREMENT :

The working group reviewed the current procurement systems of different organisations and evaluated the advantages and disadvantages of centralised and decentralised procurement as follows:

CENTRALISED PROCUREMENT SYSTEM

ADVANTAGES	DISADVANTAGES
- Low prices/Bulk purchase - Quality assurance more feasible - Adherence to suggested drug list - Improved planning and timely implementation - Less logistical and administrative problems - Appropriate centralised storage - Labelling and drug information in national languages - Facilitate Adverse Drug Reaction reporting - More possibility for research and studies - Assistance between organisations through drugs exchanges - Prevention of drug leakage to the market through putting a unique mark on packages	- Limitation in suppliers' selection - Security - Difficult to participate for those organisations that run on short term projects

DECENTRALISED PROCUREMENT SYSTEM

ADVANTAGES	DISADVANTAGES
- Freedom - Timing	- High prices - Quality assurance less feasible - Less adherence to suggested drug list - Difficulties in planning and timely implementation - More logistical and administerial problems - Problems in storage - Labelling and drug information in national languages is less feasible - Difficulty in Adverse Drug Reaction reporting - Less possibility for esearch and studies - Less chance for assistance between organisations through drugs exchanges - Prevention of drug leakage to the market is difficult, because authorities cannot differentiate easily donated drugs from others in the market

CONCLUSION: the working group suggests establishing a central procurement unit for joint purchasing. This system could be either established within a present organisation or a new one. If possible, the production of large-volume injectable solutions and Oral Rehidration Salts (ORS) should be supported at Avicena Pharmacutical Institute /MOPH, Kabul.

4.3 QUALITY ASSURANCE:

Taking into consideration of the importance of quality assurance the following recommendations are made:

- Reestablishment of the quality control laboratory in Kabul or within a well-functioning organisation.
- Quality control will be easier in a centralised procurement system.

- WHO certification scheme on the quality of pharmaceutical products moving to international commerce should be used [5].

4.4 STORAGE & DISTRIBUTION:

As several drugs require special storage conditions, special attention should be paid to this field.

- Improving the present stocks, as well as training store-keepers is recommended.
- Drugs procured by the aid community should carry a unique mark or symbol in order to be differentiated from other drugs available in the markets.
- In case of central procurement, problems with storage will decrease.
- Inter-organisational cooperation in drug storage especially at regional levels.

4.5 DRUG USE:

Drug use at the end point of drug utilisation has an important place. Irrational drug use can negate all the effort of drug supply.

4.5.1 PRESCRIBERS:

- Providing doctors with a copy of Afghan National Formulary [6]. The original document was published by MOPH and WHO.
- More topics on drug information for Mid-Level health workers through SALAMATY magazine.
- Preparing drug formulary for Mid-Level Health Workers e.g. shorter version of the above formulary, by MoPH and WHO.
- Organising training workshops for all levels of prescribers at medical institutions with technical assistance of WHO and UNICEF.
- Since all prescribed drugs are registered at facilities, studies on drug use should be encouraged by technical assistance of WHO and UNICEF.
- Special training workshops and research on drug use in Acute Respiratory Infections and in Diarrhoeal diseases with technical assistance of WHO and UNICEF.

(5) WHO certification scheme on the qulity of pharmaceutical producst drugs moving to international commerce, WHOPHARM, Geneva, February 1994.

(6) Afghan Naitioal Formulry, MOPH, 1996 (available form MOPH and WHO office, Afghanistan)

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* : only attended some sessions.

ACKNOWLEDGMENT:

ACBAR Health Sub-committee and the working group would like to thank UNICEF/ Afghanistan Programme Office for funding this Workshop.

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